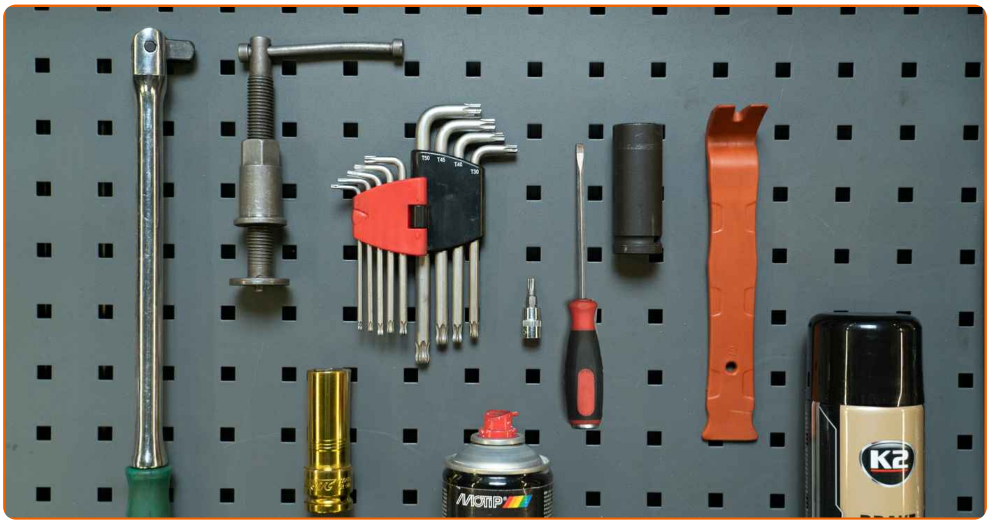
AUTODOC CLUB

How to change brake pads on a car – replacement tutorial

VIDEO TUTORIAL



REQUIRED TOOLS:



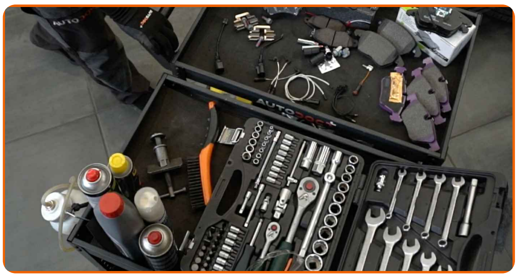
- Flat screwdriver
- Tap wrench
- Torx wrench
- Torx bit
- Wheel impact socket
- Impact socket
- Ceramic grease
- Brake cleaner
- Jack
- Brake caliper wind back tool

BUY TOOLS

Reasons for replacing brake pads:

- wear
- abnormal noise when braking
- reduced braking efficiency

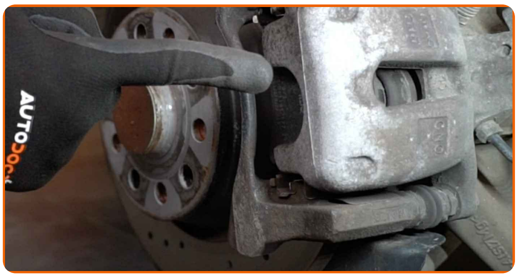
1 Prepare the appropriate tools and new brake pads



AUTODOC recommends:

- Be sure to replace brake pads as a set on an axle
- The procedure for replacing the front and rear brake pads is almost identical

2 The rear brake calipers may be equipped with a parking brake mechanism



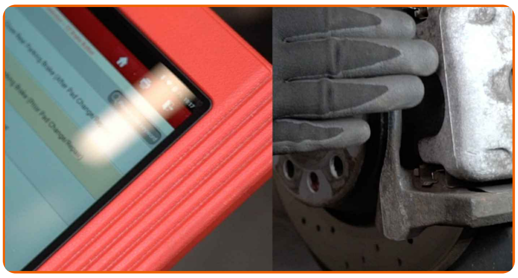
3

If it is mechanically driven by a cable, detach the cable before replacing the brake pads



4

If it is electrically actuated, set the system to the service mode



5

When replacing the brake pads, the brake caliper pistons should be wound back into the caliper body



6

If the rear brake calipers are equipped with a parking brake mechanism, their pistons also need to be turned while being wound back. Use a special tool with adapters



7 The most common design is a floating type caliper



8 It has to be removed before replacing the brake pads



Please note!

- Take into account that there are brake calipers with two or more pistons

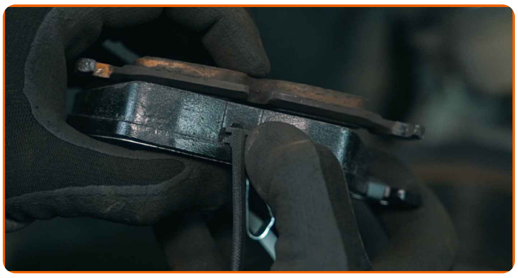
9 The brake pad wear sensor indicates when the brake pads need to be replaced



10 When the brake pads are worn, the wear sensor's contact closes and a corresponding signal is sent to the on-board computer



11 Brake pad wear sensors are single-use and should be replaced together with the brake pads



12 If the sensor is mechanical, it starts contacting the disc when the brake pad is worn



13 This causes a specific noise



14 To access the brake pads, raise the car and remove the wheels



15 When using a jack you also need to use jack stands



16 Clean the brake caliper and its fasteners



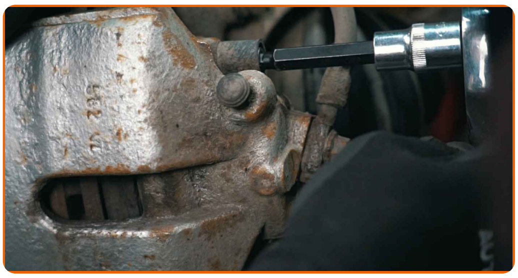
AUTODOC recommends:

- Use safety goggles, gloves, and a respirator

17 While carrying out the replacement, regularly check the brake fluid level in the reservoir



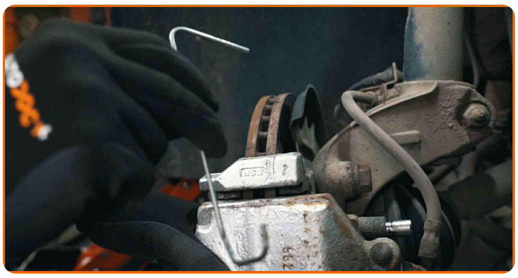
18 Unscrew and remove the brake caliper fasteners



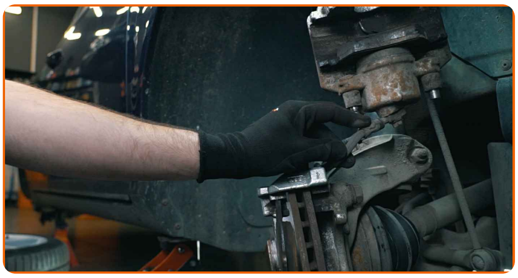
19 If the caliper is difficult to remove, use a suitable tool to force it apart or to pry it off



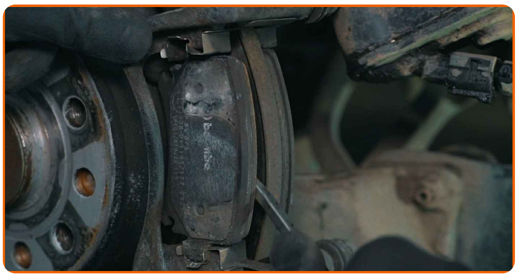
20 Hang the brake caliper from the suspension or the car body



21 Do not hang the caliper from the brake hose to avoid damaging the hose



22 Remove the brake pads



Please note!

- Please note: Brake pads can be additionally secured in the caliper piston

23 Inspect the brake pads after removal



24 If their friction linings are worn uniformly, this means that all components of the system are functioning properly



25 If the outer brake pad is more worn than the inner one, it gets stuck when moving in the anti-rattle clips in the bracket



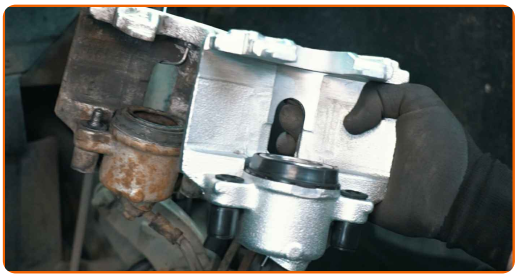
26 If the inner brake pad is more worn than the outer one, check the condition of the caliper guide pins



27 Replace faulty elements of the brake caliper using a repair kit



28 Or replace the whole brake caliper



29 Remove the anti-rattle clips if there are any, and replace them if necessary



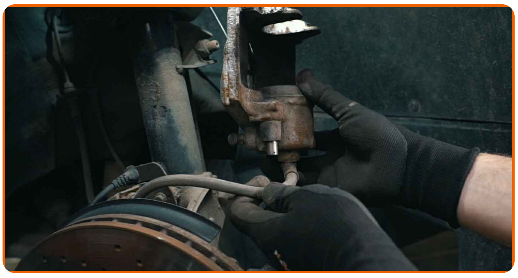
30 Clean the mounting seats



31 Check the dust boots of the guide pins and make sure that the guide pins themselves move freely



32 Inspect the dust boots of the caliper pistons and the brake hose and its fasteners



33 Inspect the brake discs and replace them if necessary



Please note:

- The kit might not include the anti-rattle clips. In this case, you should buy them separately

34 Clean the mounting seats of the brake pads on the brake caliper bracket. Clean all the components of the brake caliper. Use a nylon brush to clean rubber elements



The system works as follows:

- When the brake pedal is pressed, the caliper piston moves out and acts on the brake pads
- This makes the brake pads press against the disc
- This results in the car braking

35 As the brake pads get worn, the brake caliper piston moves out further and further



36 It should be wound back to its original position before installing the new brake pads. Use a special brake caliper piston wind-back tool



Important!

- If your rear brake calipers are equipped with an integrated parking brake, you may need to rotate the pistons while winding them back

37 When the brake caliper piston is wound back, part of the brake fluid returns to the reservoir



Caution!

- The fluid may overflow

38 Connect a special device to the brake bleeder screw and loosen the bleeder screw



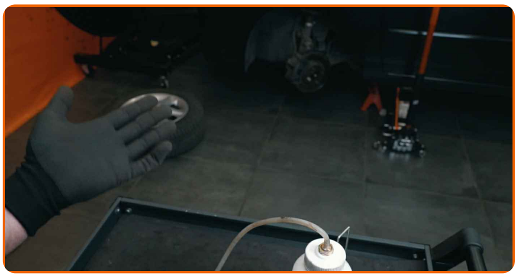
39 The fluid will flow into the special container through the hose



40 Tighten the bleeder screw and make sure that it's air-tight



41 Top up the brake fluid reservoir with new brake fluid of a suitable type



42 Look at the design of the new brake pads



43 Read the manufacturer's instructions



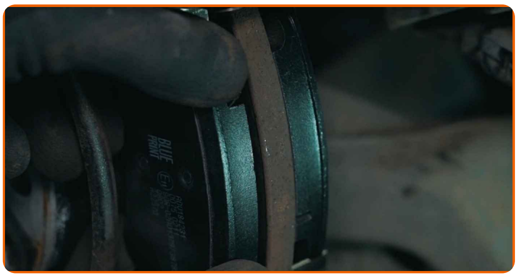
44 Treat the surfaces where the brake pads contact the caliper and bracket with anti-squeal paste



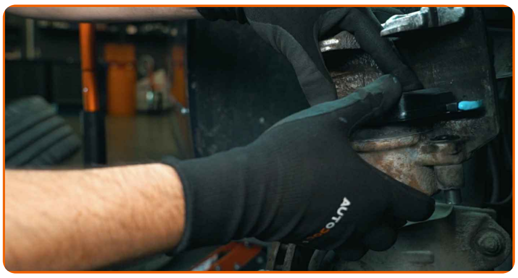
45 Do not apply too much anti-squeal paste to prevent it from getting on the friction surface



46 The brake pads should move freely in the anti-rattle clips



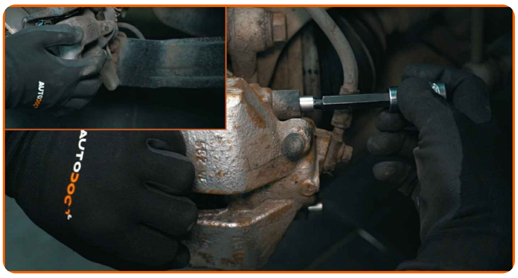
47 Install the brake pads



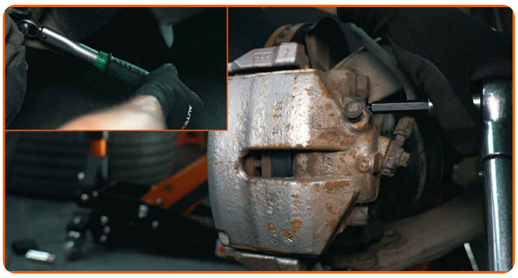
48 Install the brake caliper



49 Screw in the brake caliper fasteners. Make sure the guide pins are not misaligned



50 Tighten the fasteners to the torque recommended by the manufacturer



51 Install all additional fastening elements



52 Treat the brake disc surface that will be in contact with the wheel rim with an anti-corrosion agent



53 Clean the brake disk surface



54 Press the brake pedal fully several times until you feel resistance



55 Check the brake fluid level in the expansion tank and refill if necessary



Please note!

- After the brake pads are installed, they have to bed in to the brake disc
- During this time, a squealing noise might be heard

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